USER MANUAL

TIMELINE

strymon®

Front Panel Controls

VALUE: Provides fine adjustment of delay time. **Push** to access the parameter menu for the current delay machine. **Hold** to access the global menu.

TIME: Provides coarse adjustment of delay time.

REPEATS: Sets the delay feedback level (number of repeats.)

MIX: Adjusts the mix of analog dry signal to wet delay signal. The Mix occurs in analog. **Set around 3 o'clock for a 50/50 mix.**

FILTER: Controls the shape of the repeats filter.
dTape: controls tape age
dBucket: controls the special dBucket filter. See dBucket section for full details.
Filter: controls center frequency of LFO filter.

GRIT: Progressively adds distortion and artifacts
dTape: controls **tape bias**
dBucket: controls **bucket loss**

TYPE: Selects the currently active **delay machine. Push** to toggle the display between showing time and the current bank. **Hold** to save the current preset.

TIP: If the parameter or global menu is currently displayed, push to **exit** and show bank or time.

SPEED: Controls the speed of the delay modulation LFO
dTape: controls **tape crinkle**

DEPTH: Controls the intensity of the delay modulation.
dTape: controls **wow & flutter**

A & B LEDS: Green if **active**. Amber if the preset has been **edited**. Off if **bypassed**.
TAP LED: Flashes to indicate delay time in quarter notes. Flashes alternating red/green while looper is active. Flashes amber to indicate that a tap division is active.

TIP: To find the knob positions of a saved preset, turn each knob until the LED returns to GREEN after glowing Amber.

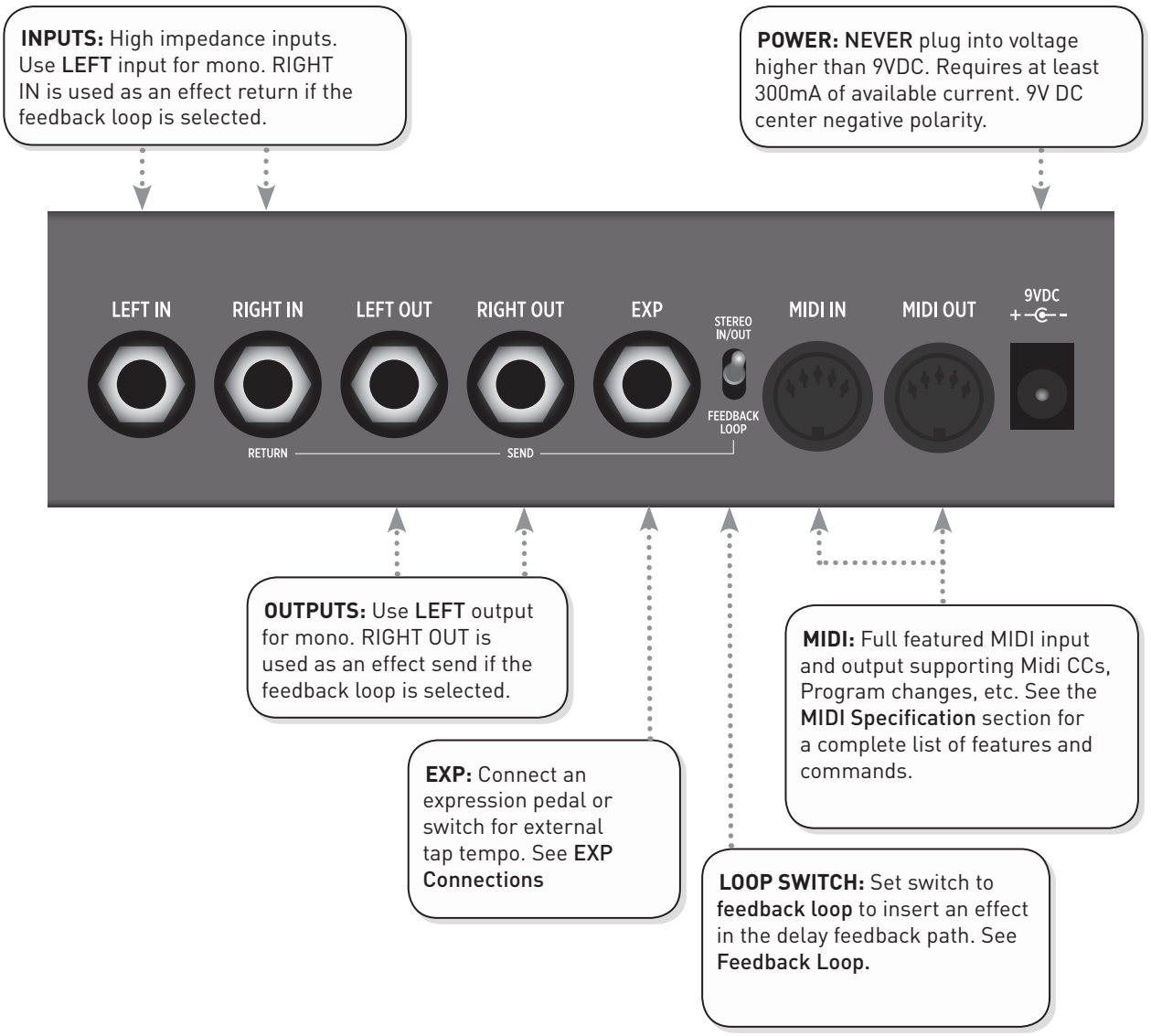
FOOTSWITCH A: Press to engage or bypass preset A of the current bank. Hold to activate infinite repeats.
Looper Active: Activates record if there is no loop recorded or clears the loop and starts recording if the looper is stopped. Overdubs if loop is playing.

FOOTSWITCH B: Press to engage or bypass preset B of the current bank. Hold to activate infinite repeats.
Looper Active: Starts playing loop. Restarts loop from beginning if pressed while playing.

TAP: Tap to set the delay time.
Looper Active: Stops loop. Hold to enter and exit looper.

BANK SELECT: Press A & B to select a lower bank. Press B & TAP to select a higher bank. While the selected bank is pending it is displayed as "B.A.N.K." After the desired bank is selected, press A or B to activate a preset from that bank.

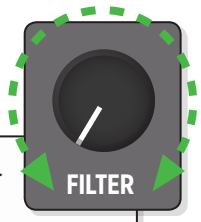
Rear Panel


INPUTS: High impedance inputs. Use LEFT input for mono. RIGHT IN is used as an effect return if the feedback loop is selected.
POWER: NEVER plug into voltage higher than 9VDC. Requires at least 300mA of available current. 9V DC center negative polarity.
LEFT IN
RIGHT IN
LEFT OUT
RIGHT OUT
EXP
STEREO IN/OUT
FEEDBACK LOOP
MIDI IN
MIDI OUT
9VDC
RETURN
SEND
OUTPUTS: Use LEFT output for mono. RIGHT OUT is used as an effect send if the feedback loop is selected.
MIDI: Full featured MIDI input and output supporting Midi CCs, Program changes, etc. See the MIDI Specification section for a complete list of features and commands.
EXP: Connect an expression pedal or switch for external tap tempo. See EXP Connections
LOOP SWITCH: Set switch to feedback loop to insert an effect in the delay feedback path. See Feedback Loop.

In Depth: Filter & Grit controls

The **Filter** knob works in conjunction with the **Grit** knob to shape the fidelity of the repeats. The brightest and cleanest repeats occur when they are both set at the minimum position.

*The below descriptions are for the Digital, Dual, Pattern, Reverse, Ice, Duck, Swell, Trem & Lo-Fi delay machines. To see how the Filter & Grit knobs work for dBucket and dTape delay machines see their respective sections.



FILTER: At minimum setting, the Filter Function provides a flat full-bandwidth response. As you turn the knob up, the repeats get progressively darker. Around 12:00, the filter is voiced to give an analog delay EQ curve. The darkest repeats occur with the Filter knob between 12:00 and 2:00 in these machine types. As you continue to turn the Filter Knob, the low end is progressively reduced, and some highs are added back in to create an EQ curve similar to that of a Tape delay when the knob is at maximum position.

GRIT: The intensity of the Grit control will depend on the strength of the input signal. Hotter inputs will intensify the effect of the Grit knob in all modes. The volume of the wet signal may change as you increase the Grit control (getting louder or softer depending on the input signal strength). Use the MIX knob to compensate accordingly.

Delay time ranges and Display

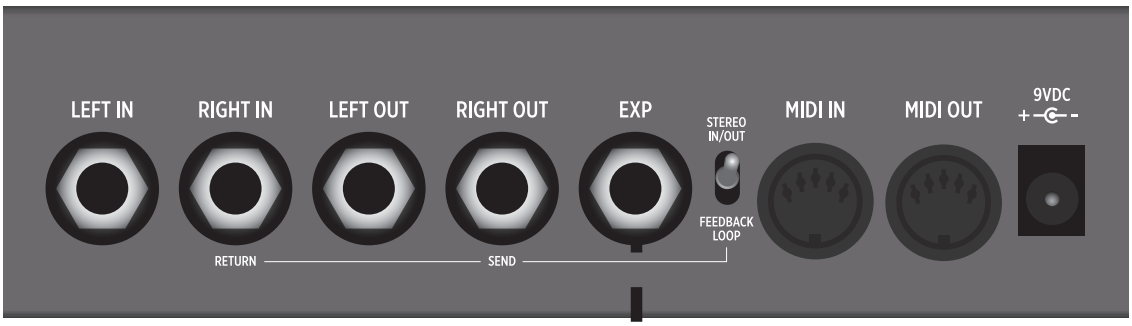
push the TYPE encoder

to toggle the display between **BANK & TIME**

TIME can be displayed in milliseconds or BPM based on the MS/BPM global parameter

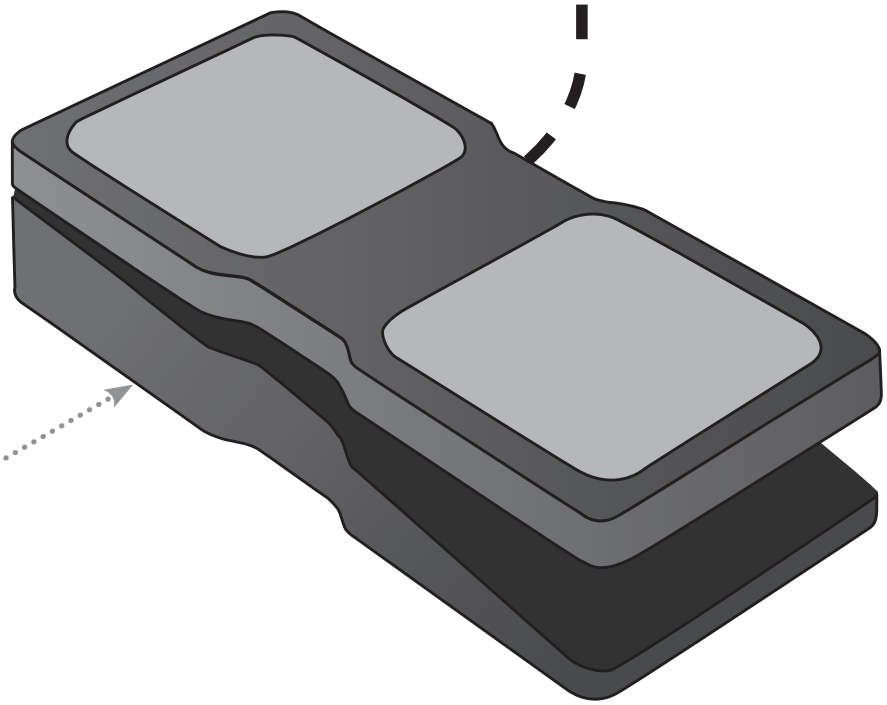
Digital, Dual, Pattern, Reverse, Ice, Duck, Swell, Trem, Filter	60mS - 2500mS
Lo-Fi	2 mS - 2500mS
dBucket (RANGE = SINGLE)	40mS - 400mS
dBucket (RANGE = DOUBLE)	80mS - 800mS
dTape (TAPE SPEED = NORMAL)	60mS - 2500mS
dTape (TAPE SPEED = FAST)	30mS - 1250mS

EXP Connections



Connect an external TAP switch to tap tempo remotely. Use a standard TRS cable to connect the external switch. Set the **EXP MD** global setting to **TAP** to use external tap.

OR

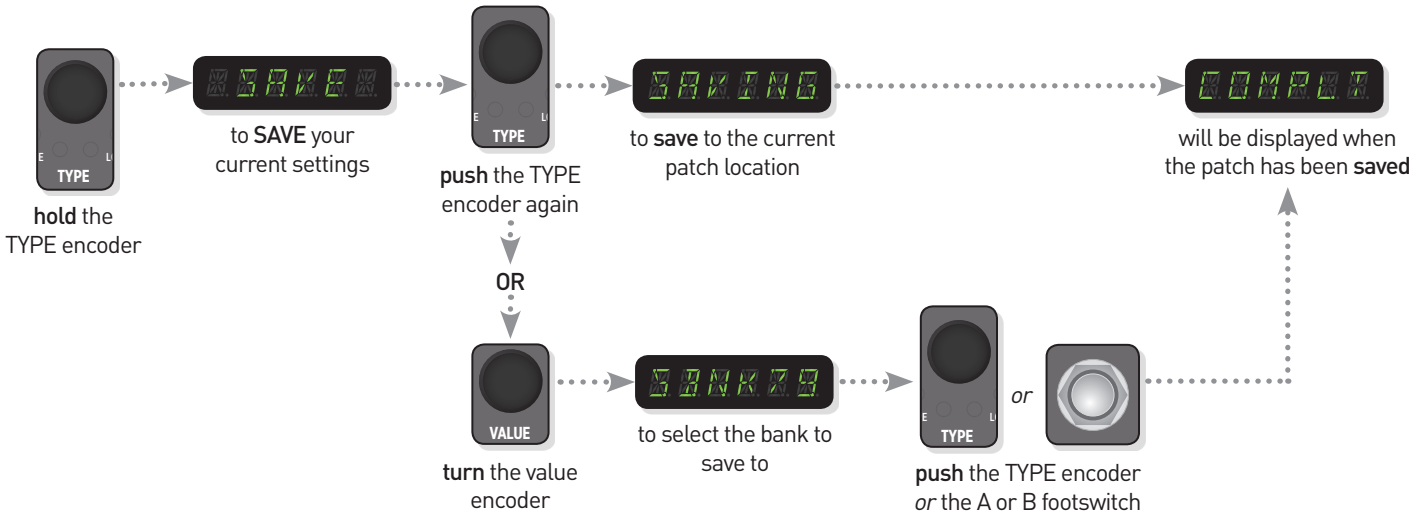


Connect a standard TRS **expression pedal** for continuous control over any knob. To select the knob(s) controlled by the expression pedal, use the EP SET parameter in each preset. All knobs can be controlled simultaneously. See **Common Parameters** for set up instructions.

Banks and Patches

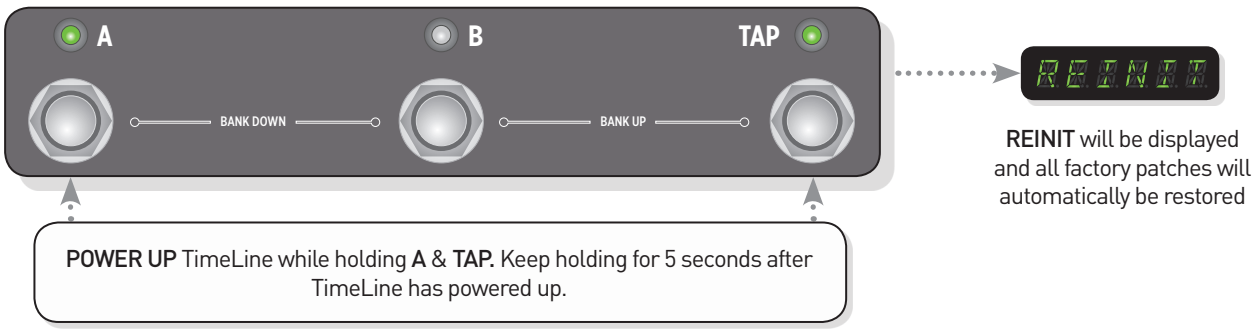
TimeLine has **100** banks with **A** & **B** patches in each bank. Banks are numbered 0 to 99 on the display. The patches in banks 0-49 are duplicated in banks 50-99 at the factory.

Saving Patches

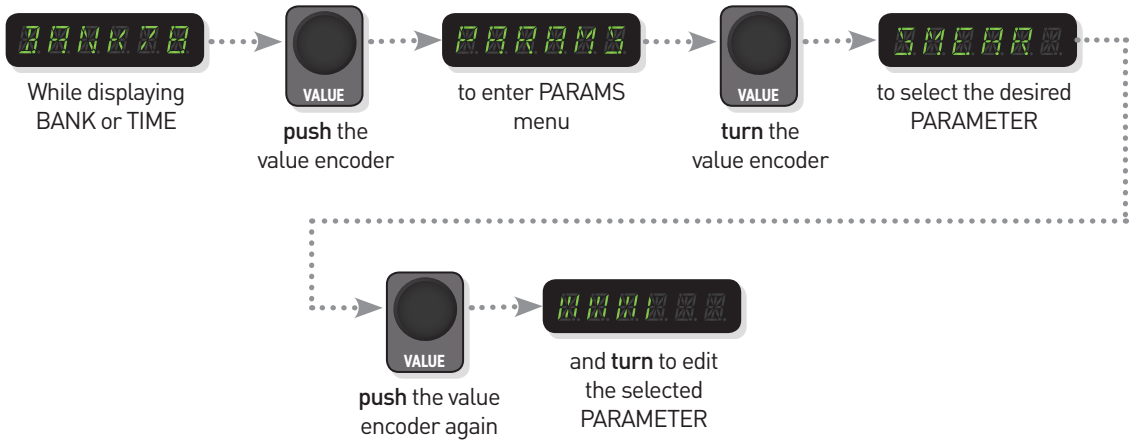


Restoring Factory Patches

CAUTION: This procedure will erase any custom patches saved in the TimeLine and restore them to factory


A
B
TAP
BANK DOWN
BANK UP
REINIT
REINIT will be displayed and all factory patches will automatically be restored
POWER UP TimeLine while holding A & TAP. Keep holding for 5 seconds after TimeLine has powered up.

Editing Parameters



Delay Machines: Common Parameters

All Delay Machines share a set of parameters. These parameters are saved with each preset and include:

Tap Division: Selects the subdivision to use for delay repeats when tapping in a tempo. Tap division options include:

Quarter notes (default), Dotted Eighth notes, Eighth notes, Triplets, Sixteenth notes

note: If TAPDIV is set to anything other than Quarter notes, the TAP LED will blink in amber

Boost: +/- 3dB of boost/cut. This can be useful for level matching in your effects chain, or can be used as an effect such as boosting a solo with delay.

Persist: Turns on delay persist "trails" which will spill over when the effect is bypassed. Use this if it is desired for delay repeats to continue after the effect has been bypassed. Note that if persist is set to ON, the bypass mode will automatically be analog bypass.

Expression Pedal ON/OFF: Enables or disables the expression pedal input for each patch.

Expression Pedal Set: Enters the expression pedal setup for each patch. All knobs can be configured to be used with the expression pedal. To set up which knobs are controlled by the expression pedal, push the Value encoder when it displays "EP SET" and it will then display "HEEL". Turn the knob(s) to the position desired at heel down on the expression pedal. Then, turn the Value encoder right to display"TOE" and set the knobs to their desired values at the toe down position on the expression pedal. An expression pedal can control all of the knobs simultaneously.

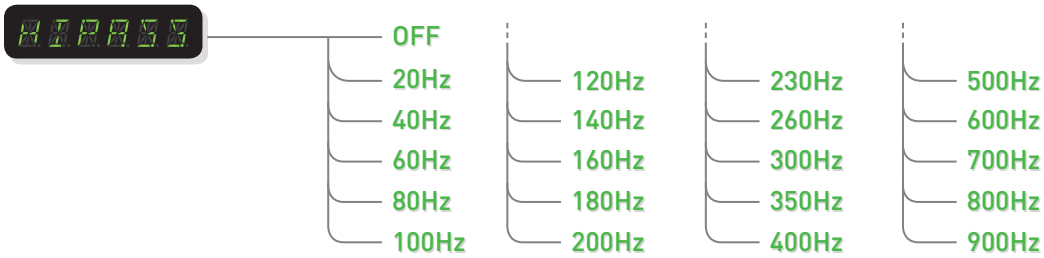
Delay Machines: Digital

A classic crystal-clear "voiced" digital delay. A wide range of delay tones are possible by tweaking the Filter, Grit and Modulation controls. Modern to classic 80's delay tones are easily achievable with this delay machine.

PARAMETERS:

Smear: Softens the attack of the repeats while maintaining full frequency response. This allows for higher mix levels while keeping the delay out of the way of the dry signal. With high Repeats levels, the delayed signal gets dreamy and ethereal.

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.



Repeat Dynamics: Reduces the Repeats in a non-linear fashion so that the delay tapers off faster than it normally would. The effect is most easily heard with high Repeats levels, allowing for high repeats that trail off to allow the next phrase or chord to stand out more.

TIPS & TRICKS: The HIPASS parameter can be very effective in producing bright repeats for a 'super-clean' digital delay. Set the Filter and GRIT knobs to minimum position for full bandwidth and experiment.

Set GRIT and FILTER knobs to 12:00 for an "analog-voiced" digital delay, or try GRIT at minimum and FILTER at maximum for a "tape-voiced" digital delay.

Delay Machines: Dual

Two independent delay lines that can be run in series or parallel. The second delay tracks the first at selectable time ratios. This is very useful for creating interesting rhythmic delays that feed into each other or act independently in parallel.

PARAMETERS:

Time 2: Adjusts the delay time of Delay 2 relative to Delay 1. Since Delay 2 is a ratio of Delay 1, it adjusts with changes in delay TIME or Tap Tempo to keep the same ratio, and allows for cool rhythmic effects.

- 1/8
- 1/7
- 1/6
- 1/5
- 1/4
- 1/3
- 2/5
- 1/2
- 2/3
- 3/4
- 4/5
- 5/6
- 7/8
- 1/1
- 5/4
- 4/3
- 3/2
- 5/3
- 2/1
- 5/2
- 3/1
- 7/2
- 4/1
- 5/1
- 6/1
- 7/1
- 8/1

Repeats 2: Adjusts the repeats level of Delay 2. Set to TRACK to follow Delay 1 Repeats knob. When not set to TRACK, you can set an independent repeat level for delay 2. In this case changing the Repeats knob will only affect the repeats level for Delay 1.

- TRACK
- ||||||||||

Mix 2: Adjusts the mix level of Delay 2. Set to TRACK to follow Delay 1 Mix, set by the Mix knob. When not set to TRACK, you can set an independent mix level for delay 2. In this case changing the Mix knob will only affect the mix level for Delay 1.

- TRACK
- ||||||||||

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.

- OFF
- 20Hz
- 40Hz
- 60Hz
- 80Hz
- 100Hz
- 120Hz
- 140Hz
- 160Hz
- 180Hz
- 200Hz
- 230Hz
- 260Hz
- 300Hz
- 350Hz
- 400Hz
- 500Hz
- 600Hz
- 700Hz
- 800Hz
- 900Hz

Configuration: Select from a series or parallel dual delay setup. In series, Delay 1 feeds Delay 2, just as if you had two independent stereo delays connected on your pedalboard. In parallel configuration, the input signal goes to Delay 1 and Delay 2 simultaneously, and the output of the two delays are fed to the Left and Right channels respectively (or summed to the Left channel in Mono operation).

- SERIES
- PARA

TIPS & TRICKS: Set the CONFIG param to PARALLEL to get independent Right and Left channel delay lines (the two parallel delays will be summed to mono in mono operation - very useful for rhythmic delays). This also allows for a 'wet - dry' stereo setup as follows:

CONFIG param to PARALLEL ::: Turn the MIX knob to minimum (dry) ::: Set RPT2 param to TRACK
Set TIME2 param to 1:1 ::: Set MIX2 param to set the level of the delays

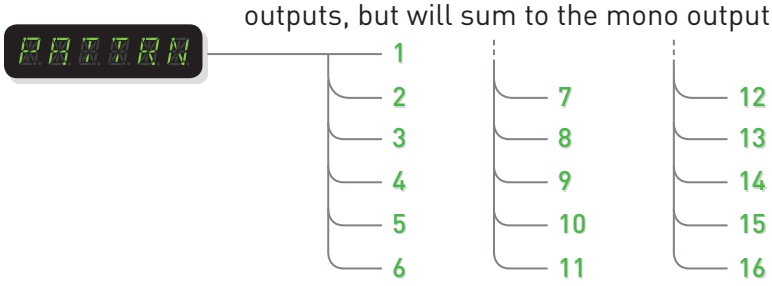
Now the knobs on the machine will control Delay2 (Right channel), while Delay1 (Left channel) is dry only (since MIX knob is minimum). The repeats will only be heard from the Right channel.

Delay Machines: Pattern

A delay with selectable repeat patterns that provide a wide range of sounds. Rhythmic, Ambient delays are easily achievable.

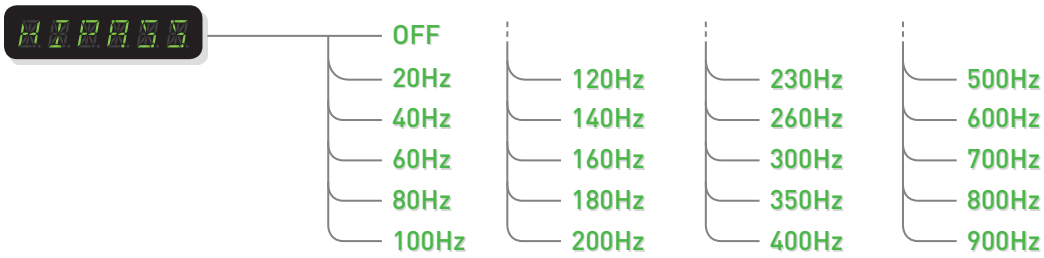
PARAMETERS:

Pattern: From simple ping-pong to rhythmic trances, the patterns can inspire new musical ideas. The patterns will create a stereo field of delay taps when using both the L and R outputs, but will sum to the mono output when the R output jack is unplugged.



Smear: Softens the attack of the repeats while maintaining full frequency response. This allows for higher mix levels while keeping the delay out of the way of the dry signal. With high Repeats levels, the delayed signal gets dreamy and ethereal.

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.



TIPS & TRICKS: The more intricate patterns can be most effective when the input is simple or 'sparse'.

Pattern 16 is a sort of 'early reflection' pattern. Experiment with delay times around 200mS, lots of Repeats and the SMEAR param at maximum to create reverb-like sounds. Add some MOD DEPTH at lower MOD SPEED and play with the Filter and Grit knobs and HIPASS param to dial in the 'reverb' tone.

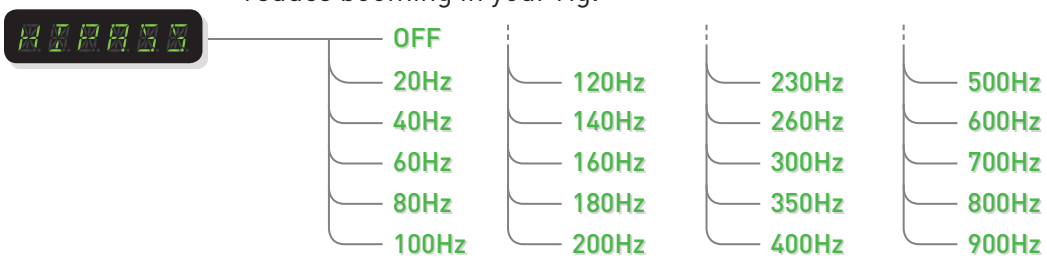
Delay Machines: Reverse

An improvement on the classic reverse delay. The input signal triggers the delay so the reverse signal is always predictable, musical and repeatable.

PARAMETERS:

Smear: Softens the attack of the repeats while maintaining full frequency response. This allows for higher mix levels while keeping the delay out of the way of the dry signal. With high Repeats levels, the delayed signal gets dreamy and ethereal.

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.



TIPS & TRICKS: Try setting the TIME knob to around 500mS, and hold a ringing chord for an interesting rhythmic effect. Experiment with the FILTER, GRIT and MOD knobs.

To keep your **dry signal feeding into the reverse delay while effectively bypassed**, assign an expression to control the MIX knob. Assign the HEEL position to the MIX knob at minimum. Assign the TOE position to the desired wet mix on the MIX knob. Rock the expression pedal all the way back to bypass the delay. Rock the pedal to the TOE position to hear reverse repeats that have already been generating while the mix was at full dry.

Delay Machines: Ice

A delay that slices up the input signal and plays back the pieces at selectable intervals. The playback interval can be varied from -1 octave to +2 octaves. The slice size can also be varied, changing the size of the audio chunks being played back.

PARAMETERS:

Interval: Selects the pitch interval of the audio slices from an octave down to two octaves up.

- -Octave
- -Major 7th
- -minor 7th
- -Major 6th
- -minor 6th
- -Perfect 5th
- -Tritone
- -Perfect 4th
- -Major 3rd
- -minor 3rd
- -Major 2nd
- -minor 2nd
- -50 cents
- -25 cents
- +25 cents
- +50 cents
- +minor 2nd
- +Major 2nd
- +minor 3rd
- +Major 3rd
- +Perfect 4th
- +Tritone
- +Perfect 5th
- +minor 6th
- +Major 6th
- +minor 7th
- +Major 7th
- +Octave
- +Octave & 5th
- +2 Octaves

Slice: Selects the size of the audio chunks that get sliced and pitched. The slice sizes scale with the delay time.

- SHORT
- MEDIUM
- LONG

Blend: Blends between the Dry and Ice signal on the delay line, Huge sounds can be obtained when keeping this control below half-way, and setting the Repeats knob around 3 o'clock.

D I I

Smear: Softens the attack of the repeats while maintaining full frequency response. This allows for higher mix levels while keeping the delay out of the way of the dry signal. With high Repeats levels, the delayed signal gets dreamy and ethereal.

- OFF
- IIIIIIIII

TIPS & TRICKS: The BLEND param settings nearer the Dry side can result in very deep and atmospheric delays with the Repeats knob set for many repeats. The ICE signal appears to 'float in' as the repeats regenerate. The MOD knobs can add much dimension to these sounds as well.

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.

- OFF
- 20Hz
- 40Hz
- 60Hz
- 80Hz
- 100Hz
- 120Hz
- 140Hz
- 160Hz
- 180Hz
- 200Hz
- 230Hz
- 260Hz
- 300Hz
- 350Hz
- 400Hz
- 500Hz
- 600Hz
- 700Hz
- 800Hz
- 900Hz

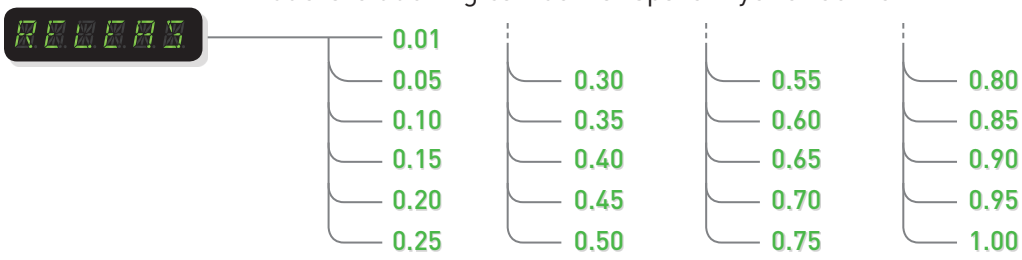
Delay Machines: Duck

A dynamic delay that reacts to your playing with adjustable sensitivity and release time. As the sensitivity is increased, the ducking effect becomes more pronounced.

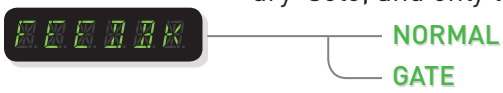
PARAMETERS:

Sensitivity: Adjusts the input sensitivity for the ducking feature. Turn to higher settings for more extreme ducking. A low level guitar signal will require higher settings to achieve the same ducking effect as a high level guitar signal. At low settings, subtle ducking effects can be achieved.

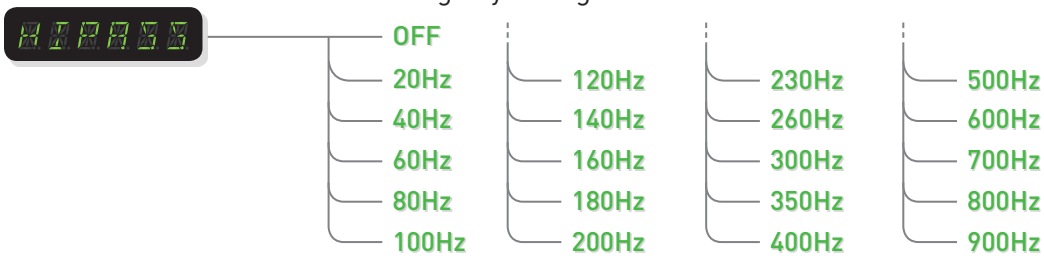
Release Time: Sets the release time for the ducking effect. This determines how quickly the delay signal returns to full level once you stop playing. A fast Release with extreme ducking can create a dramatic special effect, while slower releases with moderate ducking can be transparent yet effective.



Ducking Feedback: Sets the feedback ducking parameter. When on, the Repeats knob is effectively set to minimum while you are playing, and then quickly returns to the Knob setting when you stop playing. Very cool for single line playing with extreme ducking, you can play a 'dry' solo, and only the last note played will repeat.



High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.



TIPS & TRICKS: With very slight amounts of ducking, the dynamics of the delay are more 'felt' than 'heard'. Set the SENS parameter to just ever-so-slightly reduce the delay volume when you play (most easily discovered with high REPEATS and MIX settings, and RELEASE around 0.30). Then reduce the RELEASE param to 0.01, while keeping the FEEDBK param at NORMAL. Now set the MIX and REPEATS to your liking. The results can be addicting.

Delay Machines: Swell

A variable attack time delay that can swell into notes or chords. This can create atmosphere and ambience in a subtle and stealthy manner.

PARAMETERS:

Rise Time: Sets the time constant of the ramp input to the delay. The display indicates the ramp time in seconds. Try setting the ramp time to about the same value as the delay time for natural swell effects.

0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00, 1.10, 1.20, 1.30, 1.40, 1.50, 1.60, 1.70, 1.80, 1.90, 2.00, 2.20, 2.40, 2.60, 2.80, 3.00, 4.00

Smear: Softens the attack of the repeats while maintaining full frequency response. This allows for higher mix levels while keeping the delay out of the way of the dry signal. With high Repeats levels, the delayed signal gets dreamy and ethereal.

OFF, IIIIIIIII

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.

OFF, 20Hz, 40Hz, 60Hz, 80Hz, 100Hz, 120Hz, 140Hz, 160Hz, 180Hz, 200Hz, 230Hz, 260Hz, 300Hz, 350Hz, 400Hz, 500Hz, 600Hz, 700Hz, 800Hz, 900Hz

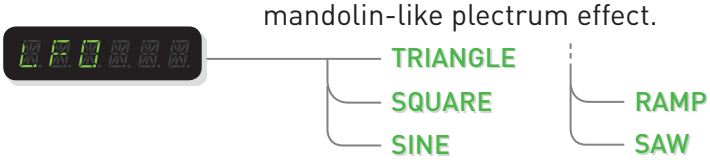
TIPS & TRICKS: Set the RISE param to match the delay time for natural swell-meets-delay effects. Turn the MIX fully CW for volume-pedal swell effects.

Delay Machines: Trem

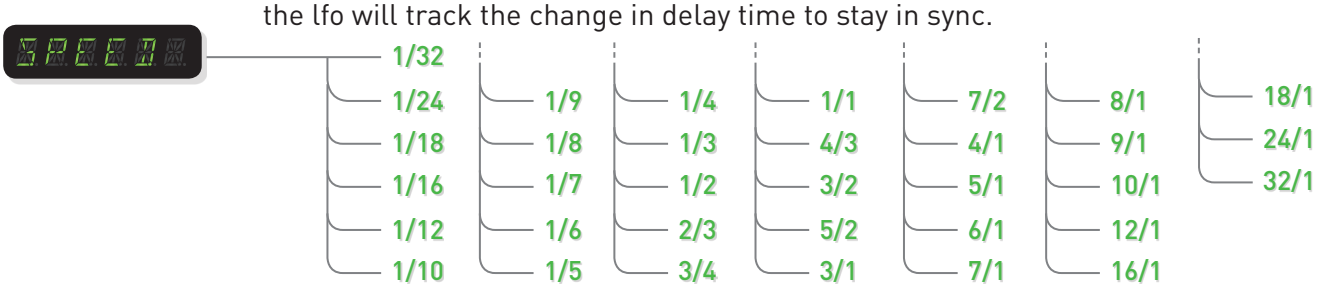
A delay with synchronized tremolo affecting the repeats. Selectable LFOs are provided for the tremolo waveshape.

PARAMETERS:

LFO (Low Frequency Oscillator): Selects from a variety of LFO waveforms to control the trem envelope of the delayed signal. For a choppy trem delay, choose the SQUARE lfo, or for smoother sounds try the SINE waveform. A fast lfo speed with a SAW wave can create a mandolin-like plectrum effect.

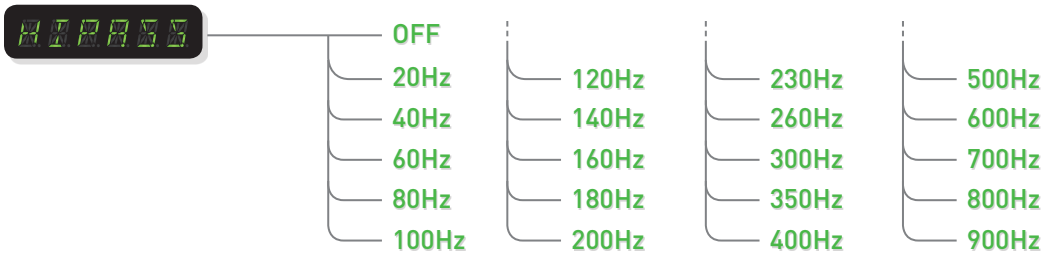


Speed: Controls the speed of the trem waveform in relationship to the Delay Time. When the delay time is changed by adjusting the Delay Tme knob or throught the TAP footswitch, the lfo will track the change in delay time to stay in sync.



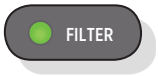
Depth: Selects the depth of the LFO waveform, with maximum setting resulting in no delay volume when the lfo waveform is at it's lowest point.

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.



TIPS & TRICKS: The SAW mode at higher LFO SPEED (3:1, 4:1, etc) will create a high-impact 'plectrum' effect. RAMP mode at lower lfo SPEED can create an interesting reverse envelope. Try SQUARE and SINE at higher LFO SPEED for a traditionally-inspired new sound. Experiment with the MIX control in conjunction with the DEPTH parameter to dial in the intensity.

Delay Machines: Filter



A delay with synchronized sweeping filter affecting the repeats. The filter can be placed pre or post delay.

PARAMETERS:

LFO (Low Frequency Oscillator): Selects from a variety of LFO waveforms to control the filter envelope of the delayed signal. Choose a sine at slow speed for atmospheric tresatments. Choose a random LFO at higher speeds and high Filt-Q for a futuristic sound.

- +Triangle
- -Triangle
- -Square
- +Square
- +Sine
- -Sine
- Ramp
- Saw
- Random
- Down
- Up

TIPS & TRICKS:
The '+' or '-' in front of the SINE, TRI and SQR lfo shapes designates the polarity of the LFO when it sync to your playing. The '+' LFO shapes will have the highest frequency occur synchronous to the input, while the '-' LFOs wll have their lowest frequencies sychronous to the input.

Speed: Selects the ratio at which the LFO tracks the delay time.

- 1/32
- 1/24
- 1/18
- 1/16
- 1/12
- 1/10
- 1/9
- 1/8
- 1/7
- 1/6
- 1/5
- 1/4
- 1/3
- 1/2
- 2/3
- 3/4
- 1/1
- 4/3
- 3/2
- 5/2
- 3/1
- 7/2
- 4/1
- 5/1
- 6/1
- 7/1
- 8/1
- 9/1
- 10/1
- 12/1
- 16/1
- 18/1
- 24/1
- 32/1

Depth: Selects the depth or intensity of the filter sweep. Use in conjunction with the Filter knob, which sets the mid-point of the sweep, to get the precise range you desire.

- OFF
- IIIIIIIII

Filter Q: Adjusts the Q, or resonance, of the sweeping filter. Lower values produce milder filtering effects with a broader response and lower resonance. Higher values create sharper resonant peaks which can lend to dramatic sweeping and special effects

- 0.5
- 0.7
- 1.0
- 1.2
- 1.5
- 2.0
- 2.5
- 3.0
- 4.0
- 5.0
- 7.0
- 10.0

Location: This parameter places the LFO-controlled filter either before the delay line (PRE) or after the delay line (POST). The sonic differences between the two can be substantial, with POST creating a more prominent effect.

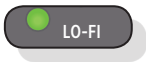
- PRE
- POST

High Pass: Reduces the low frequency content of the wet signal after the delay. A useful additional tone sculptor for delays on low-note riffs or chords where you want to reduce booming in your rig.

- OFF
- 20Hz
- 40Hz
- 60Hz
- 80Hz
- 100Hz
- 120Hz
- 140Hz
- 160Hz
- 180Hz
- 200Hz
- 230Hz
- 260Hz
- 300Hz
- 350Hz
- 400Hz
- 500Hz
- 600Hz
- 700Hz
- 800Hz
- 900Hz

TIPS & TRICKS: The FILT-Q parameter sets the resonance or sharpness of the filter. At higher settings, the increase in amplitude at the filter's resonant frequency can result in an increase in apparent wet signal volume. Use the MIX knob to adjust the wet level accordingly.

Delay Machines: Lo-Fi



Allows creative destruction of your delay signal. Add filtering, vinyl noise, low bit rate distortion, sample rate aliasing, etc.

PARAMETERS:

Sample Rate: Selects the sample rate of the delay line, from 96 KHz all the way down to 750Hz. As the sample rate is reduced, aliasing artifacts wreak havoc on the repeats.

- 750Hz
- 1 kHz
- 1.5 kHz
- 2 kHz
- 3 kHz
- 4 kHz
- 5 kHz
- 6 kHz
- 7 kHz
- 8 kHz
- 9 kHz
- 10 kHz
- 11 kHz
- 12 kHz
- 14 kHz
- 16 kHz
- 19 kHz
- 24 kHz
- 32 kHz
- 48 kHz
- 96 kHz

Bit Depth: Reduces the digital bit depth from 32 bits down to 4 bits. Fuzzy crunchy artifacts are introduced as the bit depth is reduced.

- 4 Bit
- 4.5 Bit
- 5 Bit
- 5.5 Bit
- 6 Bit
- 6.5 Bit
- 7 Bit
- 7.5 Bit
- 8 Bit
- 9 Bit
- 10 Bit
- 11 Bit
- 12 Bit
- 13 Bit
- 14 Bit
- 15 Bit
- 16 Bit
- 18 Bit
- 20 Bit
- 24 Bit
- 32 Bit

Mix: Mixes the lo-fi (bit and sample-rate dependent) signal with the full resolution signal. Heinously corrupted audio can sit on top of the full resolution signal, or go full lo-fi mix for just the crud.

D | L

Vinyl: Our exclusive dVinyl technology introduces random vinyl dust noise and scratches from a 33 1/3 rpm record. The first half of the control (dynamic) adds vinyl noise that only occurs with the repeats, while the 2nd half of the control (static) adds full-time vinyl noise for song intros, outros or bridges.

- D ||| (dynamic)
- S ||||| (static)

Filter Shape: A collection of filters inspired by telephones, victrolas, am radios, bull horns, and other gadgets. The mixed lofi and full-resolution signal (along with any dVinyl noise) goes through the selected filter.

- OFF
- 1 (Portable Vintage Amp)
- 2 (Victrola Phonograph)
- 3 (70s Clock Radio)
- 4 (Bullhorn Megaphone)
- 5 (Cheerleader's Plastic Megaphone)
- 6 (Antique Telephone Ear Piece)
- 7 (Cell Phone)
- 8 (Apartment Intercom)

TIPS & TRICKS:
With a minimum delay time of 2ms, you can set the MIX to full wet (fully CW) and get a real-time lofi machine with bit-crush, sample-rate and filtering possibilities. All knobs and PARAMS are still active. Additionally, you can create modulation effects like chorus, flange and vibrato by using the MOD SPEED and MOD DEPTH knobs to modulate the delay line. For modern digital mod effects, set the SAMPLE rate to 96kHz and BITS to 32 and turn the FILTER param to OFF. Experiment with the Filter and Grit knobs and the Lo-Fi Params to go from pristine to vintage to garbage can.

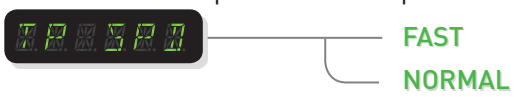
Delay Machines: dTape

An intricate re-creation of a sliding head tape delay system.

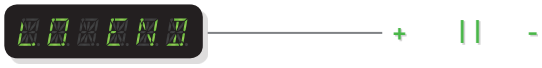
TIPS & TRICKS: The mechanical effects of wow/flutter and tape crinkle will track to the Tape Speed parameter. Select FAST for higher fidelity, including wider playback head frequency response. Select NORMAL for a warmer tape sound. High SPEED and DEPTH knob settings (tape crinkle and wow/flutter) with NORMAL Tape Speed will produce the characteristics of an old un-serviced tape machine.

PARAMETERS:

Tape Speed: Choose Fast speed for a higher fidelity experience or Normal for standard tape machine operation. The Wow/Flutter (Mod Depth knob) and Tape Crinkle (Mod Speed knob) track the tape speed for a huge range of tape machine experiences.



Low End Contour: Allows for shaping the low-end from full low-end to extreme progressive high-passing. With high repeats, this control is a major factor in the overall tape machine sound.



KNOB FUNCTIONS: In dTape, four of the knobs assume different controls than the other delay machines.

TAPE AGE: In dTape, the filter knob takes on the function of TAPE AGE. This controls the bandwidth of the tape just as it would change over time in a traditional tape delay machine. As regular tapes wear out, their bandwidth becomes limited. The TAPE AGE control recreates this. Set to minimum for a fresh, full bandwidth tape. As the knob is turns clockwise, the tape will get progressively darker.

TAPE BIAS: In dTape, the GRIT knob takes on the function of TAPE BIAS. This control adjusts tape machine bias, from under-biased to over-biased. Bias sets the dynamic range and headroom of the delay signal. Higher bias levels result in reduced echo volume and limited headroom. Lower bias settings result in the cleanest echoes with the most headroom. For an **optimally biased** tape machine set to **9:00**. For an under biased tape machine with extra high frequency response set to minimum.

TAPE CRINKLE: In dTape, the SPEED knob takes on the function of TAPE CRINKLE. This control adjusts the amount and severity of tape irregularities, including **friction**, **creases**, **splices** and **contaminants**. Tape Crinkle characteristics track accordingly to tape speed. Set to minimum for a fresh, clean tape. Set to maximum for a tape that has been mangled and chewed for years.

WOW & FLUTTER: In dTape, the DEPTH knob takes on the function of WOW & FLUTTER. This control varies the amount of mechanically related tape speed fluctuations. This also results in natural tape machine style **modulation**. Turn the knob fully counter clockwise for a perfectly tuned, cleaned and serviced tape machine. Turn the knob fully clockwise to hear the sound of a tape machine in need of service. In between the extreme settings, a natural tape modulation is achieved.

TIPS & TRICKS: Reduce the Repeats knob if necessary when using minimum bias to tame the regenerative high frequencies.

Delay Machines: dBucket

An fully nuanced re-creation of classic analog bucket brigade delay systems.

PARAMETERS:

Range: Varies the amount of bucket brigade circuits that the delayed signal travels through. Single is essentially one 4096 stage bucket brigade "chip" while Double is equivalent to two 4096 stage bucket brigade "chips" in series.

TIPS & TRICKS: The RANGE parameter selects a 'one-chip' dBucket delay, or a 'two-chip' dBucket delay. The one-chip delay has half the delay range (SINGLE - 400mS) as the two-chip delay (DOUBLE - 800mS), and experiences clock-releated artifacts at half the delay time as the two-chip delay. For cleaner delays of 300ms to 400ms, use DOUBLE with lower GRIT settings. For the warm, fuzzy, lofi sound of the ealiest analog delays, use the single option with lots of GRIT and set the Filter between 12:00 and 5:00 to taste.

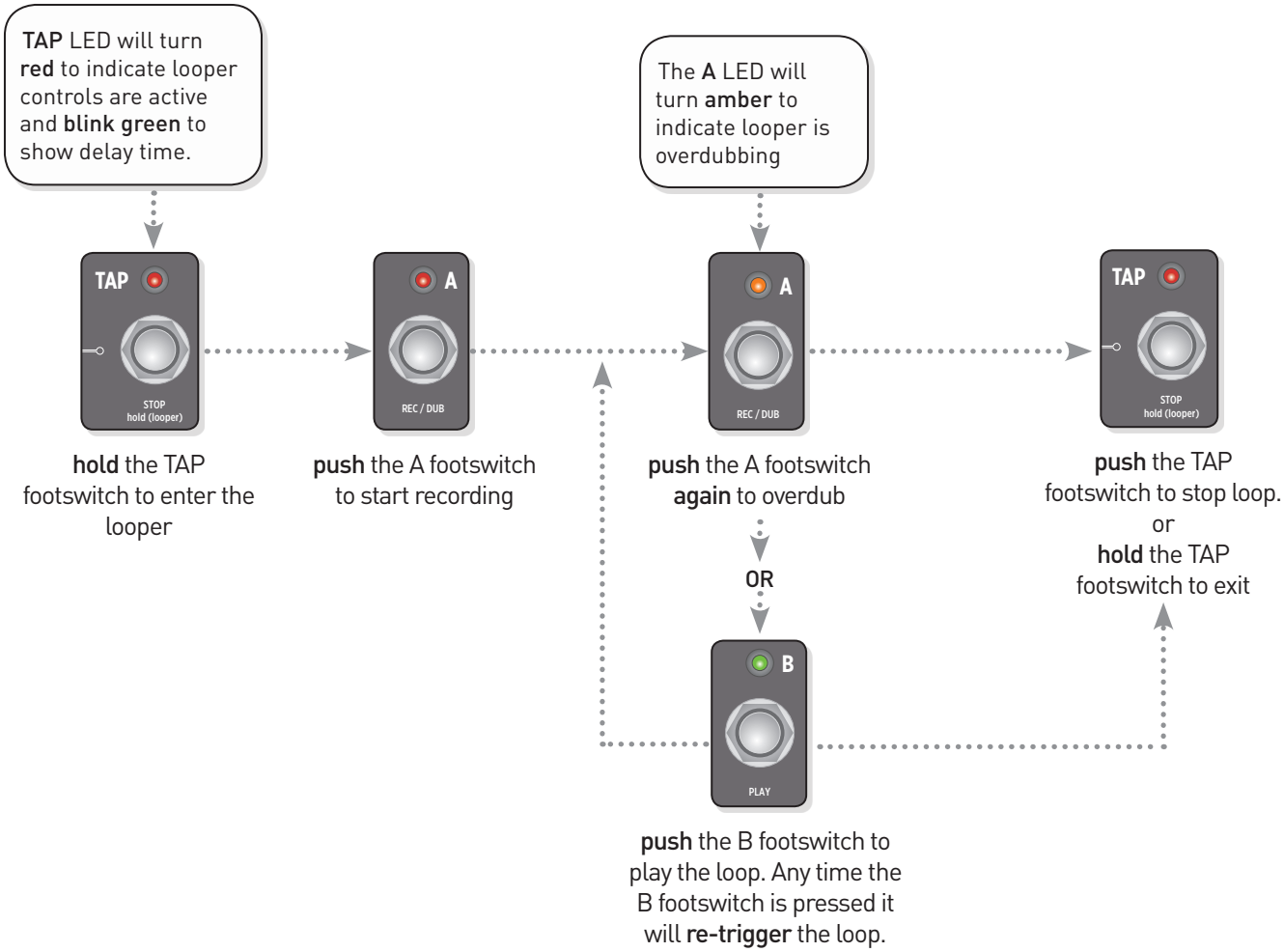
KNOB FUNCTIONS: In dBucket, two of the knobs assume different controls than the other delay machines.

FILTER: In dBucket, the filter control makes the repeats either **darker** or **brighter** depending on preference. 12:00 is a neutral filter setting. Turning the filter clockwise makes the repeats darker and they will get progressively darker with each repeat. Increasing the bucket loss will darken the repeats even further. Turning the filter counterclockwise makes the repeats brighter by applying a 'post' high shelf EQ to the wet signal.

BUCKET LOSS: In dBucket, the GRIT knob takes the function of BUCKET LOSS. This controls the amount of bucket brigade "chip" loss at each stage in the **dBucket** algorithm, from no loss at minimum, to full noisy loss at maximum. Set to 3:00 to get maximum distortion loss with just a hint of noise. Increasing from 3:00 adds more noisy loss.

TIPS & TRICKS: A classic analog delay sound is one with a bright first repeat and darker subsequent repeats. To dial this in, set the FILTER knob at minimum and the GRIT (bucket loss) at 12:00. Set the delay time. The bucket loss will reduce the bandwidth and fidelity of the repeats progressively with minimum coloration from the FILTER.

Looper


TAP LED will turn red to indicate looper controls are active and blink green to show delay time.
The A LED will turn amber to indicate looper is overdubbing
TAP
STOP
hold (looper)
A
REC / DUB
A
REC / DUB
TAP
STOP
hold (looper)
hold the TAP footswitch to enter the looper
push the A footswitch to start recording
push the A footswitch again to overdub
push the TAP footswitch to stop loop.
or
hold the TAP footswitch to exit
OR
B
PLAY
push the B footswitch to play the loop. Any time the B footswitch is pressed it will re-trigger the loop.

NOTE: The loop can be played in the background if desired. Normally the loop will stop when exiting the looper. To keep playing the loop when exiting looper set the Looper Exit global to PLAY. The looper can also be controlled via MIDI at all times.

LOOPER GLOBALS: There are controls to vary the loop level, looper exit behavior and looper pre or post configuration in the GLOBALS menu. Please consult the globals section of the manual for more information.

LOOPER MIDI CONTROL: Controlling the looper via MIDI is accomplished by sending MIDI note numbers with a velocity greater than zero OR MIDI CCs. Record, Play, Stop, Reverse, and Half Speed can all be controlled via MIDI. See the MIDI specification for the note numbers and CCs.

Globals Menu

Global parameters affect TimeLine regardless of what patch is currently active.

Time Display: Configures the display to show delay time in **Milliseconds** or **Beats Per Minute.**

- MS
- BPM

Looper Location: Switches the Looper to be **Pre** or **Post** delay.

- PRE
- POST

Looper Level: Sets the volume level of the looper playback.

- IIIIIII

Looper Exit: Determines if the looper stops when exiting or keeps playing in the background.

- PLAY
- STOP

Bypass Set-Up: Changes the bypass mode between **True Bypass** and **Buffered Bypass**. In True Bypass, electromechanical relays are used to bypass TimeLine so that no components are touching the input signal. In Buffered Bypass the bypassed signal runs through a high quality analog buffer.

- TRUE BYPASS
- BUFFERED BYPASS

MIDI Channel: Sets the MIDI Channel. Can be set to 1 - 16.

- CH 1 - 16

MIDI Continuous Controllers: Turns MIDI CC messaging (continuous controllers) ON or OFF.

- ON
- OFF

MIDI Patch Change: Turns MIDI patch change messaging ON or OFF.

- ON
- OFF

MIDI Through: When set to ON, MIDI messages that arrive at the input are sent to the output.

- ON
- OFF

Bank Scroll: Sets the maximum bank number to scroll to.

- BNK 1-99

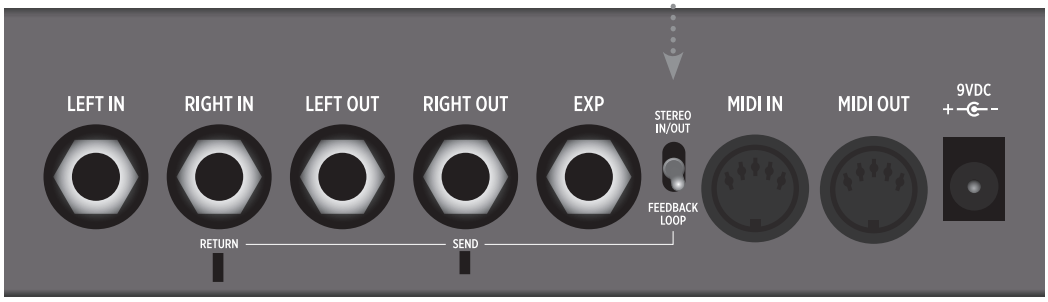
EXP input mode: Configures the **EXP** input to use an **Expression Pedal** or an external **TAP** footswitch.

- PEDAL
- TAP

Feedback Loop

Set the **FEEDBACK LOOP** switch to the down position to insert an external effect into the delay feedback path.

NOTE: If not using an external effect in the feedback loop, set switch to stereo.



Connect an **external effect** to the feedback loop. Any external effect can be used. Feel free to experiment with the different sounds that can be achieved. All of the delay repeats will be processed through the external effect.

MIDI Specification

KNOBS:	CC#	Value Range
Type encoder	19	0-11
Time	3	0-127
Repeats	9	0-127
Mix	14	0-127
Filter	15	0-127
Grit	16	0-127
Speed	17	0-127
Depth	18	0-127
PARAMETERS:		
Tap Division	21	0-4
Boost	23	0-60
Persist	22	0-1
Smear	38	0-18
High Pass	47	0-20
dTAPE - Tape Speed	58	0-1
dTAPE - Low End	59	0-20
dBUCKET - Range	45	0-1
DIGITAL - Repeat Dynamics	56	0-1
DUAL - Time 2	32	0-26
DUAL - Repeats 2	34	0-18
DUAL - Mix 2	33	0-18
DUAL - Config	36	0-1
PATTERN - Pattern	39	0-15
SWELL - Rise Time	44	0-27
TREM - Speed	61	0-34
TREM - Depth	57	0-18
TREM - LFO	29	0-4
FILTER - Q	40	0-11
FILTER - LFO	28	0-10
FILTER - Depth	41	0-18
FILTER - Speed	42	0-34
FILTER - Location	43	0-1
LO-Fi - Mix	51	0-20
LO-Fi - Vinyl	52	0-18
LO-Fi - Sample Rate	49	0-20
LO-Fi - Bit Depth	50	0-20
LO-Fi - Filter	53	0-8
ICE - interval	30	0-29
ICE - slice	46	0-2
ICE - blend	25	0-20
DUCK - Sensitivity	37	0-17
DUCK - Release	55	0-20
DUCK - Feedback	54	0-1
LOOPER:		
Record	87	any
Play	86	any
Stop	85	any
Reverse (toggle)	94	any
Full/Half Speeed (toggle)	95	any
Pre/Post (toggle)	96	any

MIDI Patch changes:

TimeLine patches are arranged in 100 banks of 2 patches each for a total of 200 presets. MIDI access to these patches is available as MIDI program change messages. Via MIDI, the patches are numbered sequentially, for example:

BANK 1A = MIDI program # 0
BANK 1B = MIDI program # 1
BANK 2A = MIDI program # 2
BANK 2B = MIDI program # 3
BANK 3A = MIDI program # 4
etc ...

To access patches 0-127 via MIDI, send regular program change messages. To access patches 128 to 199, first send a MIDI Patch Bank message (CC# 0) with a value of 1, then the program change message.

Other MIDI CC numbers:

	CC#	Value Range
A footswitch	80	down=0 up=127
B footswitch	82	down=0 up=127
TAP footswitch	81	down=0 up=127
Remote TAP	93	any
Expression Pedal	100	0-127
MIDI Patch Bank	0	0-1

(value = 0 or 1, send a 0 to access patches 0 to 127
send a 1 to access patches 128 to 199)

Looper MIDI control via MIDI note #'s:

The full time looper can also be controlled by sending MIDI note numbers with a velocity greater than zero.

Record	note 0, velocity > 0
Play	note 2, velocity > 0
Stop	note 4, velocity > 0
Reverse (toggle)	note 14, velocity > 0
Full/Half Speed (toggle)	note 16, velocity > 0
Pre/Post (toggle)	note 17, velocity > 0

MIDI Time Clock:

TimeLine will accept MIDI clock at the MIDI input and sync delay time.

Features

- 12 hand crafted delay machine algorithms for meticulous and nuanced delay sounds
- Ultra Low Noise, high performance A/D and D/A Converters
- Premium analog front end and output section
- Analog dry path for a zero latency dry signal that is never converted to digital
- High Performance DSP
- 200 presets, selectable via encoder or on the fly via footswitch
- Numerous deep edit parameters on all delay machines
- Full time 30 second looper available pre or post delay
- Stereo Input & Output
- Expression pedal input with selectable simultaneous control over multiple knob parameters
- Feedback loop option for inserting an external effect into the delay feedback
- +/- 3dB adjustable analog boost or cut configurable per preset
- Delay persist "trails" selectable per preset
- Full time Tap Tempo footswitch and external Tap footswitch available via EXP input
- Rugged & Lightweight Anodized Aluminum Chassis
- Intuitive, performance friendly User Interface
- Global bypass selectable between True Bypass or Analog Buffered Bypass

Specifications

Input Impedance	1Meg Ohm
Output Impedance	100 Ohm
Signal to Noise	115 dB typical
A/D & D/A	24-bit 96kHz
Frequency Response	20Hz to 20kHz
Max Input Level	+8dBu
Bypass Switching	True Bypass (electromechanical relay switching) or Analog Buffered Bypass (with selectable delay persist "trails")
Dimensions	5" deep x 6.75" wide x 1.87" tall

Power Supply

Input Voltage	9VDC Center Negative
Required Current	300mA

Strymon Non-Transferrable Limited Warranty

Warranty
Strymon warrants the product to be free from defects in material and workmanship for a period of one (1) year from the original date of purchase. If the product fails within the warranty period, Strymon will repair or, at our discretion, replace the product at no cost to the original purchaser.

Exclusions
This warranty covers defects in manufacturing discovered while using this product as recommended by Strymon. This warranty does not cover loss or theft, nor does the coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage, lightning, or natural disasters.

Limits of Liability
In the case of malfunction, the purchaser's sole recourse shall be repair or replacement, as described in the preceding paragraphs. Strymon will not be held liable to any party for damages that result from the failure of this product. Damages excluded include, but are not limited to, the following: lost profits, lost savings, damage to other equipment, and incidental or consequential damages arising from the use, or inability to use this product. In no event will Strymon be liable for more than the amount of the purchase price, not to exceed the current retail price of the product. Strymon disclaims any other warranties, express or implied. By using the product, the user accepts all terms herein.

How to Obtain Service Under this Warranty
For North American customers: Contact Strymon through our website at http://www.strymon.net/support for Return Authorization and information. Proof of original ownership may be required in the form of a purchase receipt.

For International Customers: Contact the Strymon dealer from which the product was purchased from in order to arrange warranty repair service.

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